BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 2019-226-E

IN RE:

South Carolina Energy Freedom Act (House Bill 3659) Proceeding Related to S.C. Code Ann. Section 58-37-40 and Integrated Resource Plans for Dominion Energy South Carolina, Incorporated

AFFIDAVIT OF JAMES W. NEELY

Personally appeared before me, the undersigned, James W. Neely, who being duly sworn states as follows:

- I am employed by Dominion Energy South Carolina, Inc. ("DESC" or the "Company") as a Senior Resource Planning Engineer.
- As such, I am responsible for modeling DESC's electric system for the purpose of calculating avoided costs, determining the least cost resource plan, forecasting fuel costs, and evaluating changes to electric generation.
 - 3. I have personal knowledge of the matters discussed in this affidavit.
- 4. As part of my duties with the Company, I am familiar with the capacity expansion software used in the industry, including the PLEXOS LT Capacity Expansion module ("PLEXOS").
- 5. The Company has already begun implementation of PLEXOS for future Integrated Resource Plans ("IRP") and IRP updates, so I have already seen PLEXOS's benefits firsthand.

- 6. As of now, the Company has entered 80% of its data in PLEXOS. Individuals have been trained on how to use it, and the model is working.
- 7. PLEXOS is recognized as a top-rated capacity resource optimization software throughout the world. It is my understanding that it is currently used in 60 countries.
- 8. PLEXOS is currently used by governmental agencies, other electric utilities, and other public service commissions. It is my understanding that PLEXOS is currently being used by the following:
 - a. United States Department of Energy
 - b. PJM Interconnection
 - c. American Electric Power Company, Inc.
 - d. Missouri Public Service Commission
 - e. California Public Utilities Commission
 - f. Midcontinent Independent System Operator
 - g. Independent Electricity System Operator (Province of Ontario, Canada)
 - h. New York Independent System Operator
 - i. California Energy Commission
 - j. National Renewable Energy Laboratory
 - k. Sacramento Municipal Utility District
 - PacifiCorp
 - m. Pacific Gas and Electric Company
 - n. Xcel Energy, Inc.
 - o. Oak Ridge National Laboratory

- PLEXOS is beneficial to the Company because it replaces all of the separate 9. modeling tools we use with one integrated hub. It allows data to pass seamlessly across phases from short-term modeling to long-term modeling. It is a powerful, integrated and efficient modeling tool.
- Another benefit of PLEXOS to the Company and Dominion Energy, Inc. as a 10. whole is that it is flexible enough to allow Dominion Energy, Inc. to model various prescriptive laws and commission orders. A single software solution across Dominion Energy, Inc.'s footprint also allows Dominion Energy, Inc. to share expert modelers across different business units.
- PLEXOS allows the Company to run its scenarios in minutes instead of hours. Innovations in distributed computing methods and parallelization mean we see exponentially faster results. PLEXOS's integration saves us time because we do not have to move from one tool to the next.
- PLEXOS is a transparent program. The platform produces all inputs and outputs for export, review and audit by outside parties. PLEXOS's data and documentation are presented in standard Excel format and easily accessible in that format.

FURTHER AFFIANT SAYETH NOT.

SWORN to and subscribed before me this 4 day of January, 2021.

My Commission Expires: